

In The Claims:

22. (Currently Amended) A dampening cylinder, comprising:

01 a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;
a piston slidably extending through the cavity in the housing;
a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing; and
a flow conduit having a first end communicating with the first portion of the cavity in the housing and a second end communicating with the second portion of the cavity in the housing, the flow conduit including:

first and second flow control valves for controlling the flow of fluid through the flow conduit between the first and second portions of the cavity in the housing, each flow control valve including a flow regulator having a plurality of user selectable discrete settings for controlling the flow rate of the fluid flowing between the first and second portions of the cavity and for providing a discrete metered fluid flow through a corresponding flow control valve;

wherein the fluid flowing between the first and second portions of the housing flows through the flow conduit.

23. (Original) The dampening cylinder of claim 22 wherein the first flow control valve includes first and second orifices interconnected by first and second parallel flow paths.

24. (Previously Amended) The dampening cylinder of claim 23 wherein the flow regulator of the first flow control valve is movable between a first retracted position wherein the flow regulator of the first flow control valve is removed from the first flow path and a second extended position wherein the flow regulator of the first flow control valve extends into the first flow path.

25. (Original) The dampening cylinder of claim 24 wherein the first flow control valve includes a check valve disposed in the second flow path, the check valve allowing the flow of fluid through the second flow path in a first direction and preventing the flow of fluid through the second flow path in a second direction.

26. (Original) The dampening cylinder of claim 25 wherein the second flow control valve includes first and second orifices interconnected by first and second parallel flow paths.

27. (Original) The dampening cylinder of claim 26 wherein the first and second flow control valves are connected in series.

28. (Previously Amended) The dampening cylinder of claim 26 wherein the flow regulator of the second flow control valve is movable between a first retracted position wherein the flow regulator of the second flow control valve is removed from the first flow path of the second flow control valve and a second extended position wherein the flow regulator of the second flow control valve extends into the first flow path of the second flow control valve.

29. (Previously Amended) The dampening cylinder of claim 28 wherein the second flow control valve includes a check valve disposed in the second flow path of the second flow control valve, the check valve of the second flow control valve allowing the flow of fluid through the second flow path of the second flow control valve in the second direction and preventing the flow of fluid through the second flow path of the second flow control valve in the first direction.

30. (Currently Amended) A dampening cylinder, comprising:
a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein, the housing including first and second openings therein;
a piston slidably extending through the cavity in the housing;
a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing;
a first conduit having a first end connected to the first opening in the housing for communicating with the first portion of the cavity in the housing and a second end;
a second conduit having a first end connected to the second opening in the housing for communicating with the second portion of the cavity in the housing and a second end;
a control valve structure disposed between the first and second conduits for controlling the flow of fluid between the first and second portions of the cavity in the housing, the control valve structure includes first and second flow control valves in series between the first and second conduits;
wherein:
the first flow control valve includes a flow regulator having a plurality of user selectable settings and being movable into the first flow path, the flow regulator providing a discrete metered fluid flow through the first flow path and controlling the flow rate of the fluid flowing from the first portion to the second portion of the cavity in the housing;

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and
the second flow control valve includes a flow regulator having a plurality of user selectable settings and being movable into the first flow path of the second flow control valve, the flow regulator providing a discrete metered fluid flow through the first flow path and controlling the flow rate of the fluid from the second portion to the first portion of the cavity in the housing;

the fluid flows into and out of the first portion housing solely through the first opening;
and

the fluid flows into and out of the second portion of the housing solely through the second opening in the housing.

31. (Cancelled)

32. (Previously Amended) The dampening cylinder of claim 30 wherein the first flow valve includes first and second orifices interconnected by first and second parallel flow paths, the first orifice communicating with the first portion of the cavity through the first conduit.

33. (Cancelled)

34. (Previously Amended) The dampening cylinder of claim 32 wherein the first flow control valve includes a check valve disposed in the second flow path, the check valve allowing the flow of fluid through the second flow path in a first direction and preventing the flow of fluid through the second flow path in a second direction.

35. (Original) The dampening cylinder of claim 34 wherein the second flow control valve includes first and second orifices interconnected by first and second parallel flow paths.

36. (Cancelled)

37. (Previously Amended) The dampening cylinder of claim 35 wherein the second flow control valve includes a check valve disposed in the second flow path of the second flow control valve, the check valve of the second flow control valve allowing the flow of fluid through the second flow path of the second flow control valve in the second direction and preventing the flow of fluid through the second flow path of the second flow control valve in the first direction.

38. (Currently Amended) A dampening cylinder, comprising:
a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein, the housing including first and second openings therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing;

a first conduit having a first end connected to the first opening in the housing for communicating with the first portion of the cavity in the housing a second end;

a second conduit having a first end connected to the second opening in the housing for communicating with the second portion of the cavity in the housing and a second end;

a first flow control valve having first and second orifices interconnected by first and second parallel flow paths, the first orifice connected to the second end of the first conduit so as to allow the first and second flow paths through the first flow control valve to communicate with the first portion of the cavity through the first conduit, the first flow control valve including:

a flow regulator having a plurality of user selectable settings and being movable into the first flow path through the first flow control valve, the flow regulator providing a discrete metered fluid flow through the first flow path and controlling the flow rate of the fluid flowing from the first portion to the second portion of the cavity in the housing; and

a check valve disposed in the second flow path through the first flow control valve, the check valve allowing the flow of fluid through the second flow path through the first flow

control valve in a first direction and preventing the flow of fluid through the second flow path through the first flow control valve in a second direction;

21
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a second flow control valve having first and second orifices interconnected by first and second parallel flow paths and being connected in series with the first flow control valve, the first orifice of the second flow control valve connected to the second end of the second conduit so as to allow the first and second flow paths through the second flow control valve to communicate with the second portion of the cavity through the second conduit, and the second orifice of the second flow control valve communicating with the first orifice of the first flow control valve, the second flow control valve including:

a flow regulator having a plurality of user selectable settings and being movable into the first flow path through the second flow control valve, the flow regulator providing a discrete metered fluid flow through the first flow path and controlling the flow rate of the fluid from the second portion to the first portion of the cavity in the housing; and

a check valve disposed in the second flow path through the second flow control valve, the check valve allowing the flow of fluid through the second flow path through the second flow control valve in the second direction and preventing the flow of fluid through the first flow path through the second control valve in the first direction;

wherein:

the fluid flows into and out of the first portion of the housing solely through the first opening in the housing; and

the fluid flows into and out of the second portion of the housing solely through the second opening in the housing.

39. (Original) The dampening cylinder of claim 38 further comprising a mounting flange extending from the cylindrical housing for facilitating the mounting of the dampening cylinder to a support.

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40. (New) A dampening cylinder, comprising:

a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing; and

a flow conduit having a first end communicating with the first portion of the cavity in the housing and a second end communicating with the second portion of the cavity in the housing, the flow conduit including first and second flow control valves having flow regulators to allow fluid to flow between the first and second portions of the cavity in the housing,

wherein:

the flow regulator of the first control valve has a plurality of user selectable discrete settings for controlling the flow rate and controlling the flow rate of the fluid flowing from the first portion to the second portion of the cavity in the housing and for providing a discrete metered fluid flow of the fluid flowing from the first portion to the second portion of the housing; and

the flow regulator of the second control valve has a plurality of user selectable discrete settings for controlling the flow rate and controlling the flow rate of the fluid flowing from the second portion to the first portion of the cavity in the housing and for providing a discrete metered fluid flow of the fluid flowing from the second portion to the first portion of the housing.
